

**PATENT**  
**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**(oracle01.026)**

5   **Applicant:**                   Guay, et al.                                   **Confirmation No.:** 3882  
Application No:                   10/678,800                                   **Group Art Unit:** 2166  
Filed:                           10/03/2003                                   **Examiner:** Navneet K. Ahluwalia  
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Title: *Preserving sets of information in rollup tables*  
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15                                   Commissioner for Patents  
   Alexandria, VA 22313-1450

**Response to a Final Office Action under 37 C.F.R. 1.116**

**Status of the prosecution**

20                                   Applicants received a restriction requirement in the above application to which Applicants responded by electing claims 1-8 and 25-32 with traverse. Examiner persisted in her restriction requirement and mailed a non-final Office action in the above application on 7/13/2006 in which she rejected elected claims 1 and 25 under 35 U.S.C. 112, 2. paragraph as vague and indefinite and claims 1-8 and 25-32 under 35 U.S.C. 102 as anticipated by U.S. published patent  
25                                   application US 2004/0120250, Langevin, et al., *Trouble-ticket generation in network management environment*, filed 12/20/02 (henceforth "Langevin"). In a response filed 10/16/2006, Applicants amended their independent claims 1 and 25 to overcome the rejection under 35 U.S.C. 112, 2. paragraph and to prevent any interpretation of the claims which would provide a basis for their rejection as anticipated by Langevin and are traversing the rejection.

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On 2/22/2007, Examiner mailed a final Office action in the above patent application in which she rejected all claims as obvious over the combination of Langevin with published US patent application 2002/0029207, Bakalash, et al., *Data aggregation server for managing a multi-dimensional database and database management system having data aggregation server integrated therein*, filed Feb. 28, 2001 (henceforth "Bakalash"). Applicants are traversing the rejection.

**Traversal**

**Requirements for a rejection under 35 U.S.C. 103**

As set forth at MPEP 2142, in order to reject a claim under 35 U.S.C. 103(a), Examiner must make a *prima facie* case which has the following elements:

5     • First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings.

• Second, there must be a reasonable expectation of success.

• Finally, the prior art reference (or references when combined) must teach or suggest all the 10 claim limitations. (MPEP 2142, Rev. 5, Aug 2006, p. 2100-125, col. 2)

In the following, Applicants will demonstrate that the Langevin and Bakalash references do not show all of the limitations of any of the claims and that Examiner has consequently failed to make her *prima facie* case with regard to all of the claims.

15    **The first Office action, Applicants' traversal of the rejections, and Examiner's response thereto**

The first Office action rejected the claims as anticipated by Langevin. In their response to the first Office action, Applicants pointed out the following limitations in Applicants' claim 1 that were not disclosed in Langevin:

20     • Claim 1 requires that the aggregation operation "aggregat[es] a plurality of entries in a table in a database management system into an aggregated entry; in Langevin, the information that is aggregated comes from outside ATG database 25. There is no further aggregation of information once the information is in ATG database 25.

25     • Claim 1 requires that the aggregated entry "include[e] a field whose value is a representation of a set that is capable of having a plurality of members"; there is simply no disclosure at all in Langevin of the organization of the information in ATG database 25.

30     • Claim 1 requires that "members of the set [are derived] from values contained in entries belonging to the plurality thereof"; as already set forth, Langevin does not disclose aggregation of information within ATG database 25 and also does not disclose "a field whose value is a representation of a set" (Response of 10/11/2006, p. 6)

35    Examiner responded by citing the Bakalash reference in addition to Langevin. Bakalash shows aggregation of information that is already in a database system into an aggregated entry in the database system. However, neither Langevin nor Bakalash discloses that the aggregated entry

"include[e] a field whose value is a representation of a set that is capable of having a plurality of members". Consequently, the combined references do not disclose all of the limitations of claim 1 and Examiner has not made her *prima facie* case of obviousness with regard to claim 1. As Examiner will immediately see, the foregoing argument applies as well to Beauregard claim

5 25.

*Rebuttal of Examiner's arguments regarding the "field whose value is a representation of a set that is capable of having a plurality of members"*

In her first Office action, Examiner finds the set-valued field in FIGs. 14a and 14b of Langevin.

10 These figures are described at paragraph [0088] of Langevin. As set forth there,

FIGS. 14a and 14b are respective left and right halves of a Database GUI 320 displaying a series of trouble-tickets generated in accordance with the invention and discussed above (as indicated by the use of related reference numerals). The GUI of FIGS. 14a and 14b, however, display the trouble-tickets in response to various database queries (in this case, a query based on the customer name). The final entry has been bolded to indicate that it corresponds to the trouble-ticket shown and described with respect to FIGS. 13a-13e. Newly appearing items 311-314 respectively (1) refers to the last time a trouble-ticket was modified; (2) specifies whether a given ticket is still open (being worked on) or closed (fault condition corrected); (3) indicates the customer's priority as determined by the customer's service contract; and (4) indicates the type of component with the fault condition (e.g., L[equals]line).

Each row of the table of FIGs. 14a and 14b thus represents a trouble ticket. The table's columns

25 specify fields in the rows which contain information about the trouble ticket specified in the row. Only columns 311-314 are explained; none of the fields of these columns have "values [which are representation[s] of a set that is capable of having a plurality of values]", as required by claim 1; it is further amply clear from the names of the remaining columns of the table and the values that columns' fields contain that none of the other columns have values which are 30 representations of a set. Fig. 14 consequently does not show such values.

Claim 1 further requires that the "members of the set [be derived] from values contained in entries belonging to the plurality thereof". The closest Langevin comes to this is the history information shown at 316 in FIG. 13(e), described at paragraph [0087]:

35 Tab 310 also includes a history field 316 with information that has been automatically logged (by the ATG Server) and manually logged (by an operator). This information is preferably accessible by both the operator and the customer so

that both parties can stay abreast of the developments associated with the fault condition and its resolution.

However, as is clear from the cited location, history field 316 contains a log. It is not a "field whose value is a representation of a set that is capable of having a plurality of members", as required by the claim. That more is involved here than simple designer's choice is apparent from the description at page 11, line 31 through page 13, line 22 of how the use of fields in which events are aggregated into sets of events makes analysis of system problems simpler.

10 Examiner also finds that Bakalash discloses a "field whose value is a representation of a set that is capable of having a plurality of members" at paragraphs 0024-0026 and FIGs. 9A, 9B, 9C1 and C2 and 10 A. Paragraphs 0024-0026 describe FIGs. 1B, 2, and 3. As described in paragraph 0025, FIG. 1B shows a multi-dimensional database (MDDB) into which base data is loaded by a base data loader. In the MDDB, the aggregation program from an Access, 15 Aggregation, and Retrieval module builds up layers of aggregated data on top of the base data. The aggregated data is organized according to a number of dimensions.

FIG. 2B shows a three-dimensional MDDB in which each record in the MDDB has two fields: a dollar field indicating the purchase price and a units field indicating the number of units of a 20 product purchased for the price. The dimensions in the MDDB are geography, products, and periods of time. The MDDB will return a record specifying dollars and units for each possible combination of geography, products, and time. For example, if the product is a widget and 25 widgets were sold on July 20, 2005 in Cincinnati for \$4.00 apiece at a total price of \$100.00, the MDDB will return a record having the field values \$100, 25 when {widget, July 20, 2000, 25 Cincinnati} is specified to the MDDB. If 100 widgets were sold in all of Ohio the day of July 20, 2005, the MDDB will return a record having the field values \$400, 100 when {widget, July 20, 2005, Ohio} is specified. If 800 widgets were sold in all of Ohio the week of July 20, 2000, the MDDB will return the field values \$3200, 800) when {widget, week containing July 20, 2005, Ohio} is specified. As is apparent from the foregoing, the base data is aggregated along 30 the various geography, time, and product dimensions of the MDDB. To speed up operation of the MDDB, after the base data has been loaded into the MDDB, the aggregation module pre-aggregates the data.

FIGs. 9(A-C2) and 10A and the description of these figures at paragraphs 0140-0144 disclose the technique of segmented aggregation which is used in Bakalash's system to aggregate data. FIG. 10A discloses how sparse aggregated data is indexed along dimension lines.

5 None of the cited locations discloses anything like the claim's "field whose value is a representation of a set that is capable of having a plurality of members", and a Lexis search of the use of the term "set" in the reference discloses many uses of the term, but no use in the sense of a value that represents a set, which is the sense in which the term is used in claim 1.

10 Thus, as maintained above, neither Langevin nor Bakalash discloses the claim's "field whose value is a representation of a set that is capable of having a plurality of members", the combined references do not show all of the limitations of claim 1, and Examiner has not made his *prima facie* case. Moreover, because the remaining claims are dependent either from claim 1 or from claim 25, which is a Beauregard claim based on claim 1, Examiner has not made his *prima facie* case with regard to any of the claims of the application.

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*Patentability of the dependent claims in their own rights*

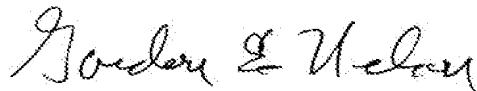
Additionally, the dependent claims set forth limitations which are not disclosed in the references, and are consequently patentable in their own rights over the references. Beginning 20 with claim 2, as pointed out in Applicants' response to Examiner's first Office action, there are no "plurality of entries [in a table in a data management system]" in Langevin that are deleted when an aggregated entry is made. As might be expected from the purpose of Bakalash's MDDB, in the MDDB, the aggregated entries are *added to* the entries for the base data; nothing is deleted when an aggregated entry is made. Thus, neither reference shows the limitation of 25 claim 2 and the claim is patentable in its own right over the references.

Claims 3-8 are all directed to limitations involving the representation of the set and the kinds of values the represented set contains. As set forth above, neither Bakalash nor Langevin discloses any "field whose value is a representation of a set" and consequently neither reference can 30 disclose the additional limitations of claims 3-8. As Examiner will immediately see, the same is true with regard to claims 26-32, which are parallel to claims 2-8.

**Conclusion**

Applicants have traversed all of Examiner's rejections as permitted under 37 C.F.R. 1.116. Applicants consequently respectfully request that Examiner reconsider his rejections in the light of the traversal and allow claims 1-8 and 25-32. No fees are believed to be required by way of  
5 this response; if any should be, please charge them to deposit account number 501315.

Respectfully submitted,



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